

3-2-1981



KELMINE CORP.

4901 YORK STREET • P.O. BOX 16043 • DENVER, COLORADO 80216 • PHONE 303/534-4102

MINING AND RECLAMATION PLAN

ON

UTAH MINERAL LEASE ML-33315

Sec. 36, T43s, R14E SLM



KELMINE CORP.

MEL SWANSON
Chief Engineer

P.O. BOX 272
NATURITA, COLORADO 81422
PHONE 303/865-2613

477 ANDREA CT.
MOAB, UTAH 84532
PHONE 801/259-6867

Table of Contents

Abstractii
Introduction.1
Access	5
History5
Geology6
Proposed Mining.	8
Reclamation.10

List of Maps

Location Index	2
Access	4
Topographic & Proposed Mine Sites 1 inch=50 feet. . Pockets A,B,C,D.	

ABSTRACT:

Utah Sec. 36, T43s, R14E, SLM lies in the Monument Valley uranium district, and totally within the Navajo Indian Reservation. Kelmine holds a valid mineral lease from the State of Utah for this section and permits for access to explore from the Bureau of Indian Affairs.

The district as well as Sec. 36 have had mining activity through the mid 1960's with 11,000 tons of .61% shipped from the mines on and adjacent to Sec. 36. Kelmine drilled 150 holes and outlined two narrow scours under the southeast corner of the property.

The east channel is 2,000 feet long with 1,400 feet mined out. The west channel is 750 feet long and open along strike to the northwest. The possibility, also, exists for the discovery of additional mineralized scours.

Adequate ore grade material is outlined to viably mine both channels as two separate operations. Two surface sites, and two 15% declines are proposed to develop these two ore bodies. The east channel decline is to be 480 feet in length with the waste and surface site to cover about one and one-half acres. The west access will be through a 450 foot long decline with the waste dump and surface site also covering one and one-half acres. About 2,000 feet of access road will have to be constructed across Utah state land. Reclamation will include the stockpiling of all surface cover material at the beginning of the project, and upon completion of mining operations the surface will

be regraded and covered so as to blend with the natural topography. Grasses compatible with the climate will be planted by broadcast method to provide cover and stabilization to the mine sites. The access road will also be regraded, covered and planted as above.

INTRODUCTION:

Utah State Minerals Lease ML33315, held by Kelmine Corporation, covers 605 acres of Sec. 36, T43S, R14E, SLM. The NW $\frac{1}{4}$ NW $\frac{1}{4}$ is not included in this lease. The property lies totally within the Navajo Indian Reservation and access is subject to the United State Department of Interior, Bureau of Indian Affairs approval. Kelmine has a permit from the Navajo Tribal Council for exploratory access until December 29, 1977, as well as a Utah State Exploration Permit with no time limit. Kelmine Corporation is making application for mining permits to the State of Utah, Department of Natural Resources.

The property lies within the Monument Valley Uranium District. Several mines have operated within the area during the late 1950's and the mid 1960's, producing a trained work force of local Navajo Indians within the immediate vicinity of Sec. 36.

The topography of Sec. 36 is a rolling mesa, gently rising to the north. The west and northern edge of the section breaks off to deep gulches and vertical canyon rims. The vegetation is sparse and consists of bunch grass, bitterbrush and sparse cedar trees. Intermittant springs feed Oljeto wash along the west boundary of Sec. 36

IDAHO

WYOMING

Salt Lake City

NEVADA

UTAH

COLORADO

Moab

Blanding

Naturita

Mexican Hat

Section 36

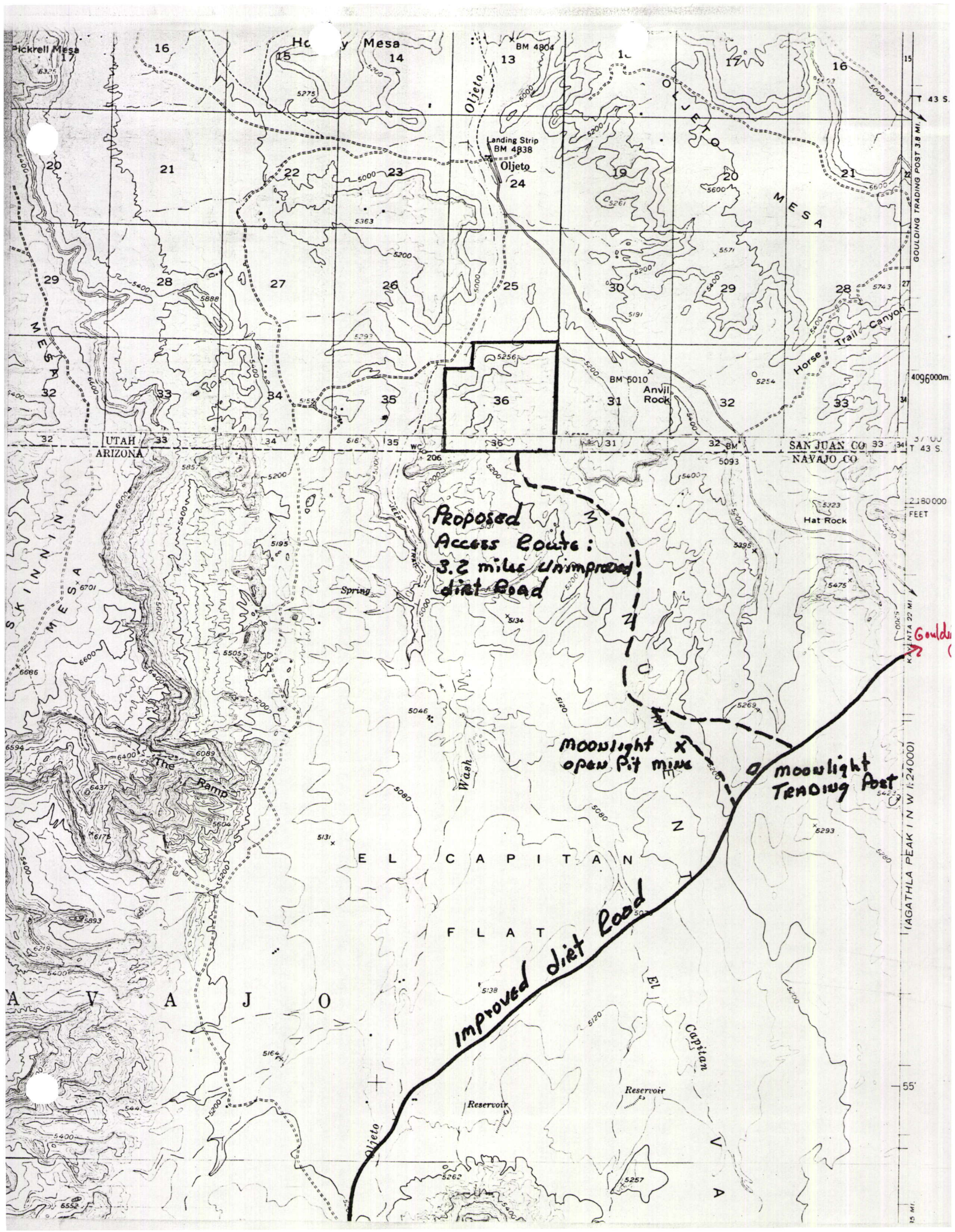
Kayenta

ARIZONA

KELMINE CORP.
Location Map
Sec. 36, T43s, R14E

but no surface water is available on the mesa. The surface is unassigned, but local Navajos graze goats and sheep over section 36, covered by ML33315.

Two abandoned mines lie within the Section and one lies just south of the Section's southern border and all three mines are filled with water from surface runoff. There is approximately one million gallons of water stored in these three mines, enough to run a small mining operation. The surface dumps of the two mines on Sec. 36 cover approximately $1\frac{1}{2}$ acres combined, and lie in or adjacent to small dry washes. Both have been cut by runoff. The portals to both mines are open and also lie in dry washes. The mines' access were through steep, about 40% grade, declines and later runoff has cut deeply into the sills. Those entries can no longer be used due to steepness, and poor ground conditions caused by the water present in the mines.



Proposed
Access Route:
3.2 miles Unimproved
dirt Road

moonlight
open pit mine

moonlight
Trenching Post

Improved dirt Road

Goulding

AGATHA PEAK IN W 1:24000

ACCESS:

Access to Sec. 36 is by Highway 47, 22 miles southwest of Mexican Hat, Utah to the Goulding Trading Post turn off, then 10 miles of paved road to Oljeto Trading Post, then southeast about 8 miles by dirt road to the abandoned Moonlight Trading Post, then 3.2 miles northwest on unimproved pickup trail to the Arizona-Utah border (unmarked) and Sec. 36. Access is also obtained by driving approximately $11\frac{1}{2}$ miles north from Kayenta, Arizona on Highway 47 and turning west on an improved dirt road, then traveling about 12 miles to the abandoned Moonlight Trading Post, then along unimproved route to Sec. 36 as above.

HISTORY:

Between the early 1950's and mid 1960's approximately 11,000 tons of $.61\% \text{U}_{308}$ was shipped from the three mines which underlie Sec. 36 (ERDA records, Grand Junction, CO.) Two of these mines are connected; The Fern, which lies just south of the Utah-Arizona border, is connected to the Radium Hill mine on the Utah side of the border. Both of these mines were operated on the same scour and between them produced 9,000 tons. The third mine, the Utah Mine, is not connected to the other two and lies in another channel scour to the west. All three mines were operated with steep declines, using hoists, and track haulage. No commercial electric power is or was available and all power is or was diesel/generator or straight diesel power. Data as to mine workings is either missing or unavailable

as only the mine map for the Fern Mine to the Arizona border was located. Kelmine Corporation, starting in January, 1977, set up a transit control net to locate the Sec. 36 boundaries, the mine portals and previous drill holes. The southeast corner of Sec. 36 was arbitrarily set as 100,000N, 100,000E. Since the mines were flooded from surface runoff, no underground survey was done. Several drill holes were located and surveyed, as well as probed. No probe data was ascertained as all the holes were closed at about 45 foot depth and the ore occurring from 80 to 120 feet as stated on the available Fern Mine maps.

After lining up the mines an assumed trend was established and Kelmine initiated a drilling program on March 2. By March 27, 1977, 150 holes totalling 14,865 feet were drilled. Two basal Chinle mineralized scours and the extend of the mine workings were outlined.

GEOLOGY:

The property is underlain by Chinle sandstones, pebble conglomerates, mudstone and siltstone, all of fluvial origin. The basal member of the Chinle Formation in this area is the Shinarump which fills channel scours in the Triassic Moenkopi siltstone. The basal sandstone channel fillings are cut by later sandstones forming numerous phases of cross bedding and discontinuous lensing of clays.

The only structural feature in the immediate area is the Oljeto Syncline which strikes north-south and runs along the west border of Sec. 36. The plunge of the Synclinal axis is southerly giving the mesa covered by Sec. 36 a dip of 3 to 5 degrees to the south.

The drilling done by Kelmine Corporation outlined two small scours. One, the east channel begins in Arizona and forms the south end of the Fern Mine and strikes N31°W for 2,000 feet. Fourteen hundred feet of the scour has been mined through the Fern and Radium Hill mines. The width averages 25 feet with mineralization from one to over four feet thick with the thickest sections and highest grades forming in the center of the scour. The basal sands thin and generally the grade decreases towards the flanks where finally the basal sand disappears. At the north end the sand filled scour disappears against a clay bank. This scour dissipates and becomes very subtle with an absence of mineralization. The depth to the top of the Moenkopi was between 100 and 120 feet.

The second scour lies parallel 500 feet west and is offset to the north such that the north end of the east channel terminated about due east of the beginning of the south end of the west channel. The second scour, the west channel, did not produce the dramatic mineralization/scour relationship.

Although the scour filling is present, strong mineralization did not always occur. The best thickness of mineralization occurred in a deep scour and at the outwash of the channel bends. The south end of the west channel is subtle with low grade mineralization. The scour is about 50 feet in width and continues along strike about 750 feet with good low grade mineralization

and intermittent high grade spots. At the northern extent of the drilling, the channel shallows up with the scour splitting around a clay bank. The main split turns westerly for 100 feet then back NW. These two bends yield ore grade mineralization and thicknesses. From this point on, no data is available. The drilling does not indicate a connection between the east and west channel scours. The depth to the top of the Moenkopi in this scour ranged from 60 to 90 feet. No significant ground water was encountered in the drill holes. Some dampness occurred at the base of the scour.

PROPOSED MINING:

The current high prices offered by local ore buyers have made small deposits economically viable for the present. Kelmine Corporation has outlined two, small tonnage, uranium deposits on ML-33315 which can be mined as two separate units, namely the east channel and the west channel. Both deposits will be developed by sinking minus 15% declines to the ore horizon with diesel powered equipment. New declines need to be sunk as both old entries are too steep for rubber tired equipment, and with the old mines full of water the ground conditions will be extremely unsafe. The east channel decline will be 480 feet and the west channel decline 450 feet in length.

The mining method to be employed is to be modified room and pillar. A main haulage will be driven along strike of the scour and will be in ore if possible.

The stoping operation will be done from the main haulage with waste pillars, and ore pillars where necessary, left for ground support. Mining and development will be done with either rubber tired or track/crawler loader and rubber tired, diesel powered, 3 ton trucks. A main electrical generator will be employed to provide 460v power to operate an air compressor for the pneumatic rock drills as well as to power ventilation fans. The water stored in the old mine workings will be utilized for the underground drilling and dust abatement. Potable water will have to be trucked in for camp use.

Two surface sites will be necessary to develop the two deposits. The east channel site will be located about 800 feet north of the Utah-Arizona border and 2,000 feet west of the east boundary of Sec. 36. This site will be on a south facing hillside about 300 feet north and 15 feet higher than a west flowing dry wash. A ten foot cut and filled site for small service buildings will be constructed approximately 150 feet long and 75 feet wide. Waste rock, approximating 4,000 tons, from the 8 x 8 decline will be deposited on the surface along contour adjacent to the prepared site. The toe of the waste dump will be above the flood plain of the wash and will run parallel to the wash. The average depth of the dump will be $7\frac{1}{2}$ feet and the total area covered by the prepared site plus the waste dump will be about $1\frac{1}{2}$ acres. The waste at both sites will be basically the same sandstone and clay that outcrops on Sec. 36 and surrounding area.

The second proposed site is for the development and mining of the west channel deposit. This site lies approximately 1800 north and 3400 west of the SE corner Sec. 36. The 8 foot cut and filled location will be on a gently south sloping flat 300 feet east and 15 feet above a south westerly flowing dry wash. Again, the site will be cut 150 by 75 along contour with approximately 3500 tons of waste rock deposited adjacent to and along contour with the cut site. The area covered by the finished site and waste rock will be about $1\frac{1}{2}$ acres. The toe of the waste dump will not encroach upon the wash. Both sites will be cut with a crawler type tractor.

These sites will be for generators, compressors, fans, service buildings, 20 x 40 at each site, and a camp at the location which is started first.

Road access across Utah State land to the mine sites will require improvement to 2500 feet of an existing 15 foot wide roadway. The improvements will consist of grading the sandy sections of the road and ballasting the rocky sections with sandstone, mine waste rock. Culverts will be placed at wash crossings. Maximum road grade to be 10%. All to be done with a crawler type tractor.

RECLAMATION:

During a soil geochem program it was found that the soil is in fact a reddish colored clay bed overlying Chinle sandstone. The pH of the soil and underlying sandstone is 7.0. This clay-soil horizon is only 12 to 18

inches thick in some places, less in others. This material, as it comes from the stripped surface sites, will be stockpiled. Upon completion of the project, all building, wood, steel and foreign matter will be removed from the property. All material containing U_3O_8 will be removed from both sites. No toxic material will be produced and the waste is the same pH as the surface. The sites will be regraded by crawler tractor so as to blend with the natural topography, the portals boarded close and the stockpiled cover spread over the sites. Revegetation with a mixture of Russian Wild Rye 2 lbs./acre, Indian Rice Grass 1 lb./acre, Four Wing Salt Brush 1 lb./acre, Crested Wheat 1 lb./acre, Sandrop Seed 1 lb./acre, found to be effective for dry soil cover will be planted during spring or late winter when surface moisture is maximum.

The complete reclamation project will be instituted upon completion of the mining project as the surface sites will be active during the operation of the mine. It is anticipated that the reclamation program can be completed within 12 months after termination of the mining operation.

The road reclamation will involve removal of the culverts, and the waste rock to be removed and deposited on the waste dump. The entire roadway will be regraded and covered with available nearby material so as to blend both topographically and in coloration with the natural surroundings. The above stated vegetal mixture will be applied to the roadway during the same period of maximum surface moisture.

ANTIQUITIES SECTION
DIVISION OF STATE HISTORY
603 East, South Temple
Salt Lake City, Utah 84102

5755

APPLICATION FOR A PERMIT TO CONDUCT ARCHEOLOGICAL INVESTIGATIONS UNDER THE PROVISIONS OF THE UTAH STATE ANTIQUITIES ACT OF 1973 AND THE IMPLEMENTING REGULATIONS ADOPTED BY THE STATE BOARD OF HISTORY.

Applicant Organization Kelmine Corporation

Principal Investigator David B. Madsen

Responsible Supervisor Steven R. Simms

Nature of Applicant Organization Mining corporation

Qualifications of Responsible Individuals Steven R. Simms performing
Fieldwork under approval of state archaeologist Madsen
Simms, B.A. anthropology U. Utah; M.A. anthropology U. Nevada.

Nature of Proposed Investigations Clearance of cultural resources on
state mineral lease 33315. Two, one acre parcels are proposed
development sites. Each of the areas will be disturbed by
building and waste rock deposition. Both areas will be intensively
surveyed for cultural resources that may be damaged by the above mentioned
development.

Area to be Investigated (must be specific and must be accompanied by a sketch or map)

Both areas are in T43S R14E section 36

#1 - SW 1/4 of NW 1/4

#2 - NW 1/4 of SE 1/4

Report of Findings to be provided to state reclamation officers
and State Historical Society, Antiquities Division.

Fieldwork conducted under the auspices of the permit applied for will begin October 11, 1977 and will be completed by

Other information pertinent to this application.

REPORT OF INSPECTION FOR CULTURAL RESOURCES

Project name and developer: Kelmine Corporation, ML 33315

Location and description of project areas: Consists of two, one acre parcels. Both are located in T₄₃S, R₁₄E section 36. One acre is situated in the southwest 1/4 of the northwest 1/4 and the other in the northwest 1/4 of the southeast 1/4 of section 36.

Both mine locations are situated on gently sloping terrain cut by numerous, shallow, dry washes draining west to Oljeto Wash. Vegetation is Lower Sonoran, characterized by widely scattered, low shrubs such as Ephedra (mormon tea), Atriplex (saltbush), with Utah juniper present in very low density. Soils at both locations are shallow and rocky with much of both areas covered by young desert pavements. The elevation of these locations is approximately 5,200 feet.

Description of examination procedures: The affected areas were inspected in their entirety by systematically walking each location. Subsurface testing by trowel probing or auger boring was considered unnecessary as soil depth could be determined by examination of surface features. Date of fieldwork was 10/11/77.

Description of findings: Both areas are barren of prehistoric material. Widely scattered historic material was observed but consists of debris from relatively recent (1950's-1964) mining activity in the area such as glass, cans etc. Due to the shallow soil depth over most of both sites, the possibility of encountering buried deposits is considered remote.

Conclusions/recommendations: The properties in question should be cleared in terms of cultural resources. No further investigation is recommended.

Signature of person in direct charge of fieldwork: Steven R. Simms



MINING APPLICATION
NO. ACT/037/029 R

Date _____

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING
1588 West North Temple
Salt Lake City, Utah 84116

NOTICE OF INTENTION TO COMMENCE MINING OPERATIONS
(Sec Rule M of General Rules and Regulations)

1. Name of Applicant or Company Kelmine Corporation
Corporation (☒) Partnership () Individual ()
2. Address P. O. Box 272, Naturita, CO.
Permanent Temporary
3. Name and title of person representing company Mel Swanson, Manager
4. Address P. O. Box 272, Naturita, CO. Office Phone 1-865-2613
5. Location of Operation San Juan Sec. 36 T. 43S R. 14E
County
6. Name of Mine Oljeto Mine
7. Mineral to be mined:

() Coal	() Flagstone	Mining method:
() Copper	() Gravel	<u>Modified underground</u>
() Manganese	() Shale	
() Iron Ore	(<input checked="" type="checkbox"/>) Uranium	<u>Room and pillar</u>
() Phosphate	() Gilsonite	
() Potash	() Bituminous Sandstone	
() Fluorspar	() Tungsten	
() Other (specify) _____		
8. Have you or any person, partnership or corporation associated with you received an approved Notice of Intention to Commence Mining Operations by the State of Utah for operations other than described herein?
() Yes (☒) No
If yes, list all approval numbers now under surety:

9. Owner/Owners of record of the surface area within the land to be affected:

<u>None assigned</u>	Address _____
_____	Address _____
_____	Address _____
_____	Address _____

10. Owner/Owners of record of minerals to be mined:

<u>None</u>	Address _____
<u>State Lease</u>	Address _____
_____	Address _____
_____	Address _____

11. Owner/Owners of record of all other minerals within any part of the land affected:

<u>None</u>	Address _____
_____	Address _____
_____	Address _____

11a. Have the above owners been notified in writing?
() Yes () No

12. Source of Operator's legal right to enter and conduct operations on land to be covered by the Notice ME3315 State of Utah, Division of Natural

Resources

13. Approximate acreage to be disturbed:

A) Mining Operation Area -	<u>3</u>	acres
(include operations, storage, & disposal area)		
B) Access Road or Haulageway -	<u>1</u>	acres
C) Drainage System -	<u>0</u>	acres

TOTAL ACRES:

4

14. Give the names and post office addresses of every principal Executive, Officer, Partner, (or person performing a similar function) of Applicant:

Name:	Title:	Address:
a. <u>C. O. Keller, President</u>		
b. <u>C. E. Keller, V. President</u>		
c. _____		
d. _____		

15. Has Applicant, any subsidiary or affiliate or any person, partnership, association, trust, or corporation controlled by or under common control with Applicant, or any person required to be identified by Item 14, ever had an approval of a Notice of Intention withdrawn or has surety relating thereto ever been forfeited? () Yes (X) No

If yes, explain:

STATE OF Colorado

COUNTY OF Denver

I, C. O. Keller, having been duly sworn
depose and attest that all of the representations contained in the foregoing
application are true to the best of my knowledge; that I am authorized to
complete and file this application on behalf of the Applicant and this
application has been executed as required by law.

Signed: *[Signature]*

Taken, subscribed and sworn to before me the undersigned authority
in my said county, this 19th day of September, 1977.

Notary Public: *[Signature]*

My Commission Expires: *Jan 7, 1978*

PLEASE NOTE:

Section 40-8-13(2) of the Mined Land Reclamation Act provides as follows:

"Information relating to the location, size, or nature of the deposit and marked confidential by the operator, shall be protected as confidential information by the Board and the Division and not be a matter of public record in the absence of a written release from the operator, or until the mining operation has been terminated as provided in subsection (2) of section 40-8-21."

Is confidential information contained herein?

YES _____ (Initial)

NO *MBL* (Initial)

Sections desired to be maintained as confidential information -

_____	_____	_____
_____	_____	_____
_____	_____	_____

MINING APPLICATION
NO. _____

Date _____

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING
1588 West North Temple
Salt Lake City, Utah 84116

MINING AND RECLAMATION PLAN

(Other forms may be used in lieu of MR 2, provided
they contain the same information)

1. Name of Applicant or Company Kelmine Corporation
2. Proposed type of operation Underground mining
3. (a) Prior Land Use(s) Underground mining
(b) Current Land Use(s) Mining & exploratory drilling
(c) Possible or Prospective Future Land Use(s) Underground mining
4. What vegetation exists on the land proposed to be affected Scattered
cedar, bunch grass & bitter brush
(a) Types and Estimated Percent cover or density: Cedar less than
1% covered, grass 7%, bitter brush 5%
5. What is the pH range of soil before mining? 7.0 pH
Name of Person or Agency and method of determining pH Polar Resources,
Elko, Nevada
6. Site elevation above sea level 5200
7. In case of coal, oil shale, and bituminous sandstone:
Principal seam(s) and thickness(es) _____
8. Estimated duration of mining operations 5 years
9. Has overburden, waste or rejected materials been classified as acid or
alkali producing? () Yes (X) No
Does the above material being moved have any other characteristics
affecting revegetation? No!
10. Will any underground workings or aquifers be encountered? (X) Yes () No
Describe Will use surface water accumulated in old mine workings.
Is there an active discharge of water from abandoned deep mines on or
crossing the land affected? () Yes (X) No If yes, describe
the quality of water being discharged. _____

11. Describe specifically a detailed procedure for:
- The mining sequence
 - The procedure for constructing and maintaining access roads, to include a typical cross-section and a profile of the proposed road grades.
 - The procedure for site preparation including removing trees and brush.
 - The method for removing and stockpiling topsoil or disturbed materials.
 - The method for the placement or containment of all disturbed materials, to include the method for handling of all acid or alkali-producing and toxic materials.
 - A procedure for final stabilization of disturbed materials.

GRADING AND REGRADING

Specifically describe:

- Typical cross-section of regrading.
- The method of spreading topsoil or upper horizon material on the regraded area and indicate the approximate thickness of the final surfacing material.
- What type of soil treatment will be utilized.
- The method of drainage control for the final regraded area.
- Maximum grading slope.

TESTING

1. Describe method for testing stability of reclamation fill material.

pH determination to check compatibility of waste & surface
Describe method for the testing of soil that is intended to support vegetation

Will reuse surface soil horizon to cover surface sites.

2. Describe any soil treatment employed as an aid to revegetation _____

None

3. Describe surface preparation of areas intended to support vegetation:

Regrade to blend with natural contour and cover with

stockpiled surface soil

REVEGETATION

1. Revegetation to be completed by:

☒ Operator
☐ Soil Conservation District
☐ Private Contractor
☐ Other (specify) _____

☐ Hydroseeding
☐ Aerial Seeding
☐ Conventional or Rangeland Drilling
☒ Broadcast and Drag
☐ Other _____

2. Will Mulch be used? () Yes (X) No

Type: _____ Rate/Acre _____ lbs.

3. Revegetation Plan and Schedule -

Species	Rate/ Acre	Planting Location	Facing N-S-E-W	Season to be replanted
Russian Wild Rye	2 lb.	Sites & road	S	Late winter/spring
Indian rice grass	1 lb.			
Four wing salt brush	1 lb.			
Crested wheat	1 lb.			
Sandrop Seed	1 lb.			

4. Will affected area be subject to livestock or wildlife grazing?

(X) Yes () No Will vegetation protection be needed? No

5. Will irrigation be used: () Yes (X) No Type _____

6. Describe maintenance procedures for revegetation if needed, until surety release is granted.

Observation and possible fencing to protect
reseeded area from sheep and goats grazed by local Navajo Indians.

STATE OF Colorado
COUNTY OF Denver

I, C. O. Keller, having been duly sworn
depote and attest that all of the representations contained in the foregoing
application are true to the best of my knowledge; that I am authorized to
complete and file this application on behalf of the Applicant and this
application has been executed as required by law.

Signed: *[Signature]*

Taken, subscribed and sworn to before me the undersigned authority
in my said county, this 19th day of September, 19 77.

Notary Public: *[Signature]*

My Commission Expires: JAN 7, 1978.

PLEASE NOTE:

Section 40-8-13(2) of the Mined Land Reclamation Act provides as
follows:

"Information relating to the location, size, or nature
of the deposit and marked confidential by the operator,
shall be protected as confidential information by the
Board and the Division and not be a matter of public
record in the absence of a written release from the
operator, or until the mining operation has been
terminated as provided in subsection (2) of section
40-8-21."

Is confidential information contained herein?

YES _____ (Initial)

NO *MR* _____ (Initial)

Sections desired to be maintained as confidential information -

_____	_____	_____
_____	_____	_____
_____	_____	_____